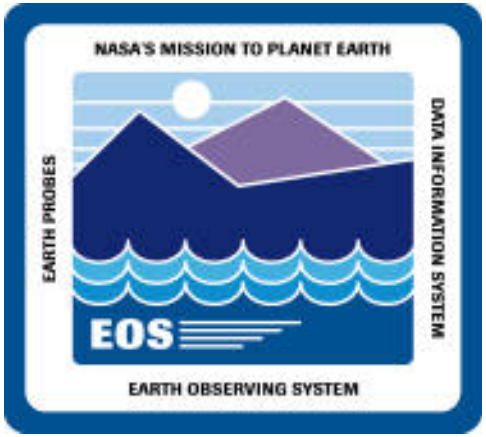

Subsetting

Jan Dreisbach

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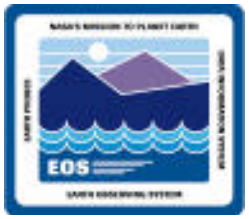
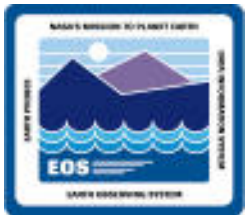
13 June 1996

Event Trace
Subsetting an ESDT 4.5.25



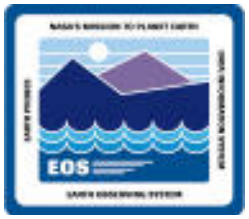
- **Scenario Purpose:**
  - **Demonstrate the process of spatially subsetting an ESDT and returning a UR to the SDSRV client**
- **Scenario Results**
  - **Subsetted granule is created**
  - **A new temporary UR is generated**
  - **Status is made available to the client**
- **Design Topics Addressed**
  - **IDR-B RID #5 Item #14: Temporary URs**

Event Trace
Subsetting an ESDT 4.5.25 (cont.)



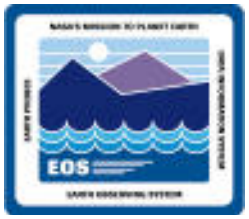
- **Preconditions**
  - **“client” connection to SDSRV has been established**
  - **Working collection already exists**
  - **Valid search on working collection has produced at least one granule**
  - **Spatial Subset service has been advertised for the granule’s ESDT**
  - **Granule science data has been formatted according to HDF-EOS grid specification**
  - **DsSrWorkingCollection Class has received the subsetting command**
  - **DsSrWorkingCollection Class used the DsSrCommand class to get the service name (SpatialSubset) and necessary parameters**
  - **DsDeDescriptor class has validated the service name and parameters**

Event Trace
Subsetting an ESDT 4.5.25 (cont.)



- **Events**
  - **DsMsMISR05 determines temporary working storage space requirements**
  - **DsStStagingDisk allocates the necessary space**
  - **DsStStagingDisk creates the file handle for subsetted product**
  - **DsMsMISR05 invokes DsMdMetadata class to get the metadata granule attributes for the appropriate archived file**
  - **SDSRV connects to STMGT**
  - **SDSRV sends DsStFileParameters the necessary file parameters**
  - **SDSRV invokes DsStArchive**
  - **DsStArchive retrieves the appropriate file and places it in the allocated working storage**
  - **SDSRV disconnects from STMGT**
  - **SpatialSubset service for the MISR05 ESDT invokes DsCsGrid**
  - **DsCsGrid uses DsCsCSDTFactory class to create a CSDT implementation**

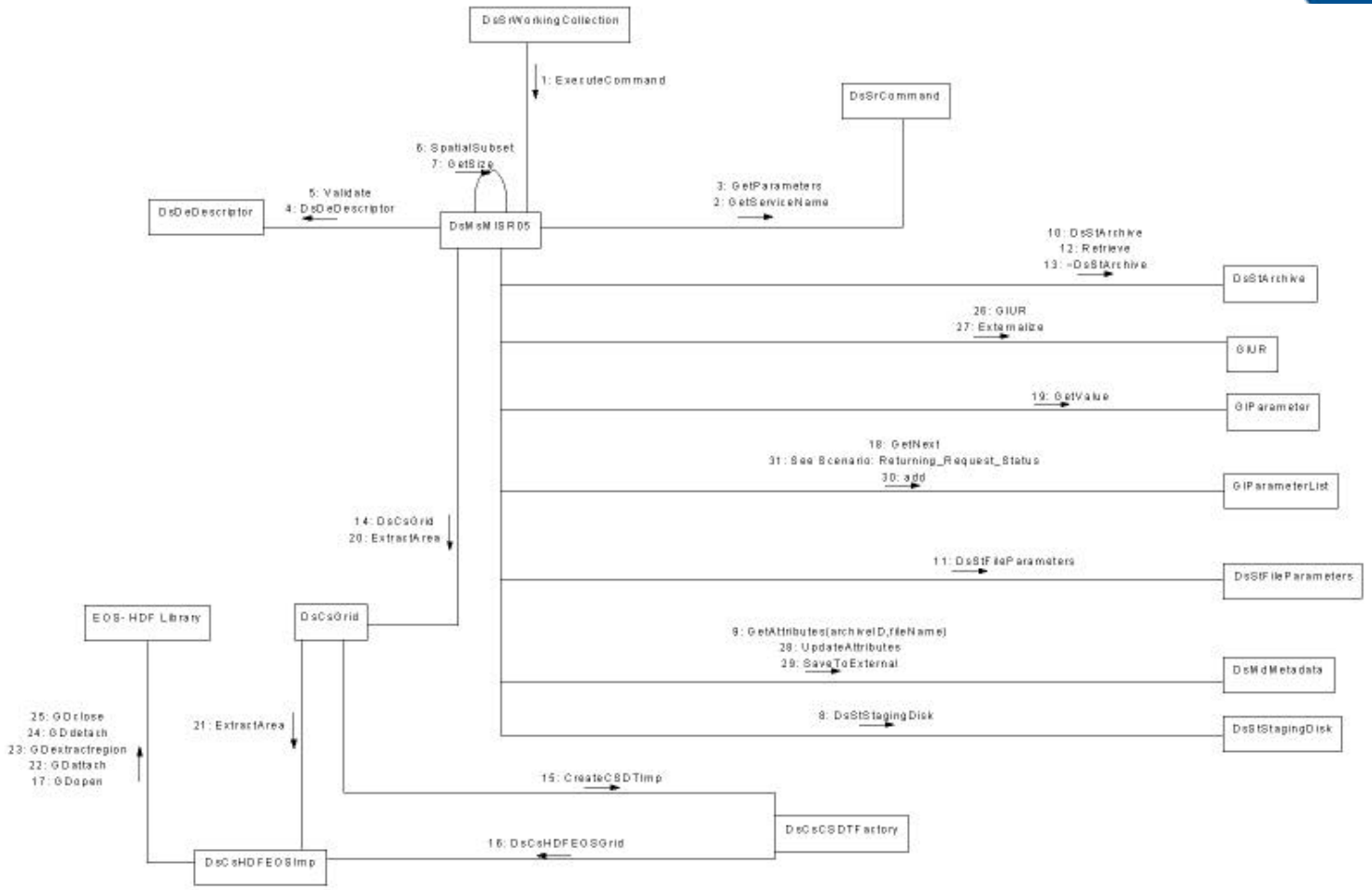
Event Trace
Subsetting an ESDT 4.5.25 (cont.)



Events (cont.)

- DsCsHDFEOSImp invokes low level HDF-EOS API calls to perform the extraction
  - GDopen opens the file in working storage
  - DsMSMIS05 gets the spatial subsetting parameters
  - DsMSMIS05 iteratively invokes GlParameterList to get subsetting area coordinates
  - DsCsGrid defines the extract area
  - DsCsHDF-EOSGrid executes a series of HDF-EOS API calls to perform the extraction into the new file
- DsMsMISR05 invokes GlUR to create the temporary UR for the subsetted granule
- DsMdMetadata updates the copy of metadata attributes for the new subsetted file
- Status is made available to the client

Event Trace
Subsetting an ESDT 4.5.25 (cont.)



File: /home/mnisar/rose/dssrv/reserv.mdl Wed Jun 5 11:54:25 1996 Object Message Diagram: sr / SDSRV_Subsetting_an_ESDT Page 1